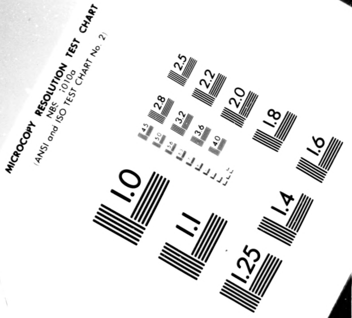
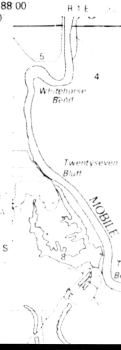
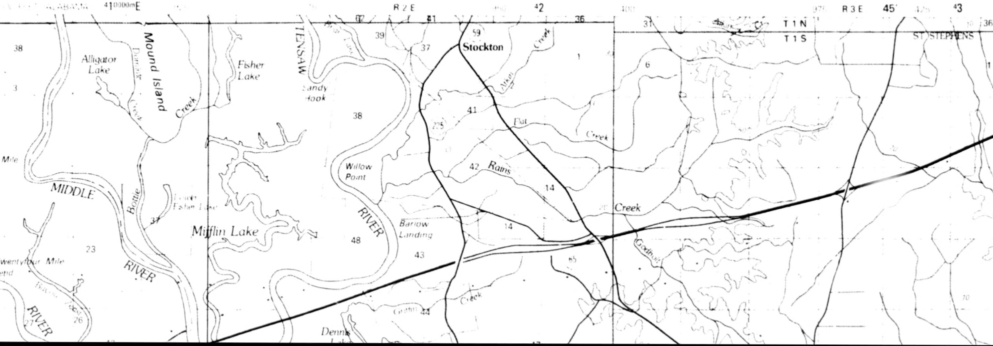
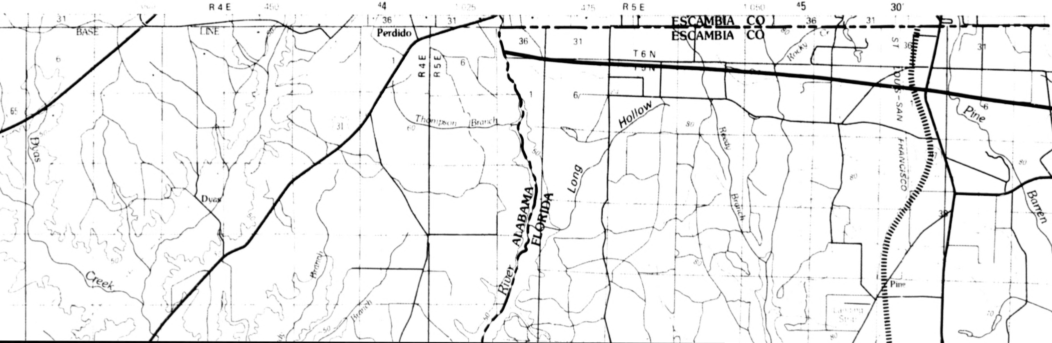
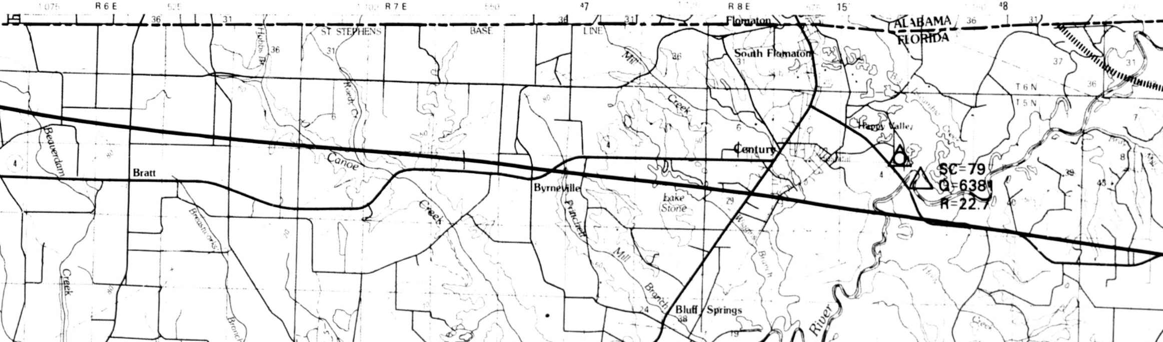

MICROCOPY RESOLUTION TEST CHART
NBS 1010a
(ANSI and ISO TEST CHART No. 2)
2.5
2.2
2.0
1.8
1.6
2.8
3.2
3.6
4.0
4.5
5.0
1.0
1.1
1.25
1.4


88°00'
31°00'
R 1 E
5
4
Whitehorse Bend
Twentyseven Bluff
MOBILE
ALABAMA
T 1 S
8


ALABAMA
410000mE
R 2 E
42
R 3 E
45'
43
T 1 N
T 1 S
ST STEPHENS
Stockton
Alligator Lake
Mound Island
Creek
Fisher Lake
TENSAW
Sandy Hook
Willow Point
RIVER
Flat
Creek
Rains
Creek
MIDDLE
RIVER
Bottle
Lower Fisher Lake
Mifflin Lake
Barlow Landing
Godbold
Twentyfour Mile Bend
RIVER
Griffin
Creek
Dennis Lake
59
225
14
65


R 4 E
R 5 E
44
45
30'
ESCAMBIA CO
ESCAMBIA CO
BASE
LINE
Perdido
T 6 N
T 5 N
Thompson Branch
Dyas
Dyas
Creek
Branch
Branch
Long
Hollow
Reedy
Branch
Rocky Cr
River
ALABAMA
FLORIDA
ST LOUIS-SAN FRANCISCO
Pine
Pine
Barren
Lookout Sta
65
31
36
6
1


1,075
R 6 E
525
R 7 E
550
47
R 8 E
15
48
ST STEPHENS BASE LINE
Flomaton
ALABAMA
FLORIDA
South Flomaton
T 6 N
T 5 N
Happy Valley
Century
Bratt
Byrneville
Lake Stone
Bluff Springs
SC=79
Q=6381
R=22.7
Beaverdam Creek
Canoe Creek
Mill Creek
Mill Branch
Pritchett
Breastworks
Hobbs Br
Roach C
Wiggins Branch
River
Creek
Branch

AUG 14 '85

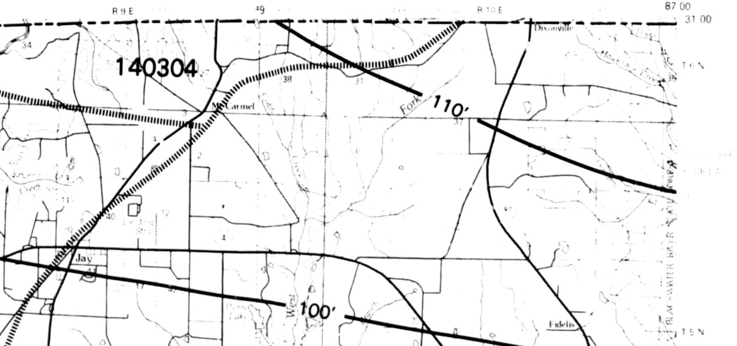
I 49.89:82/47-1/
611-R-1

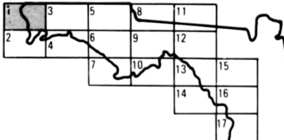
MAP E1

Bay Minette

FLORIDA ECOLOG
ATLAS

HYDROLOGY AND CLIM


R 9 E
49
R 10 E
87 00
31 00
140304
Dixonville
T 6 N
Mt Carmel
Fork
110'
Jay
West
100'
Fidelis
BLACKWATER RIVER
T 5 N


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

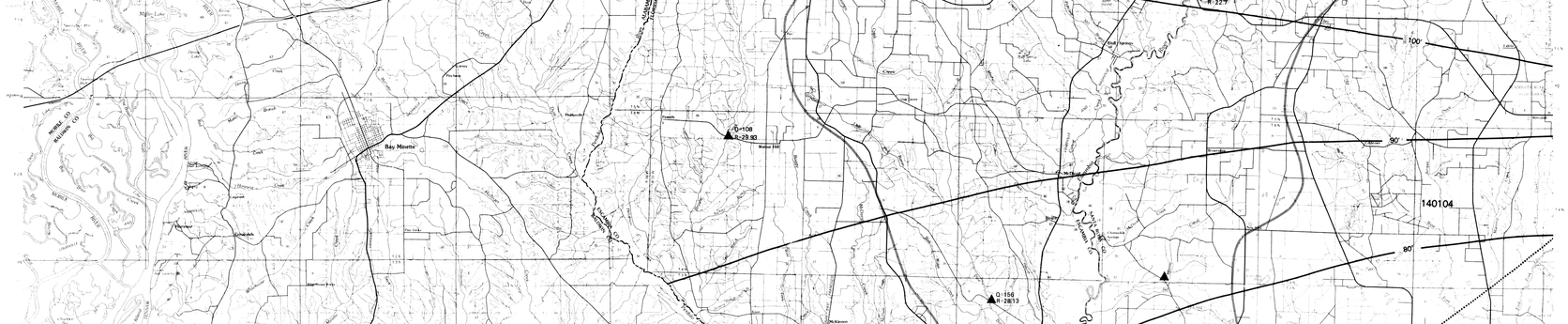
MICROCOPY RESOLUTION TEST CHART
NBS 1010a
(ANSI and ISO TEST CHART No 2)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0

map E1

MMS 85-0011
FWS/OBS-82/47.1

ICAL

ATOLOGY



ORIGINAL

Scale 1:100 000

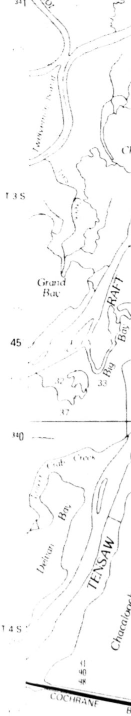
TOPICAL MAPS IN THIS ATLAS:

A. BIOLOGICAL RESOURCES
B. SOCIOECONOMIC FEATURES
C. SOILS AND LANDFORMS
D. OIL, GAS AND MINERALS
E. HYDROLOGY AND CLIMATOLOGY

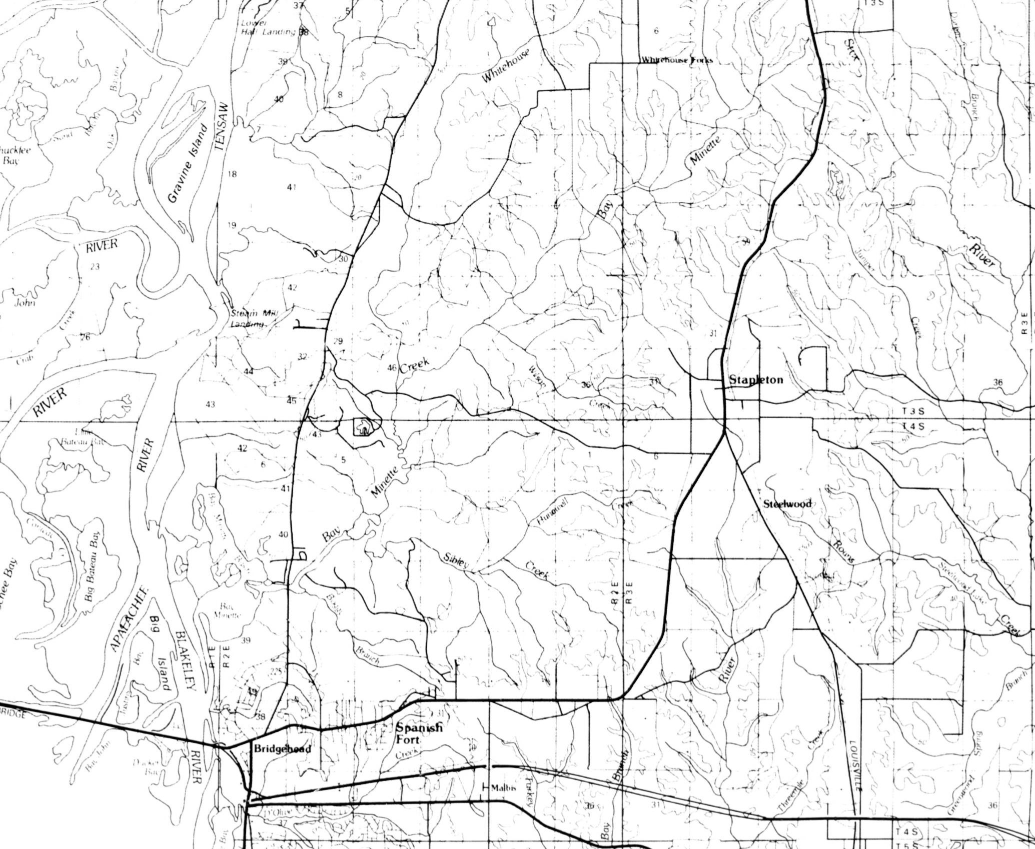
1984

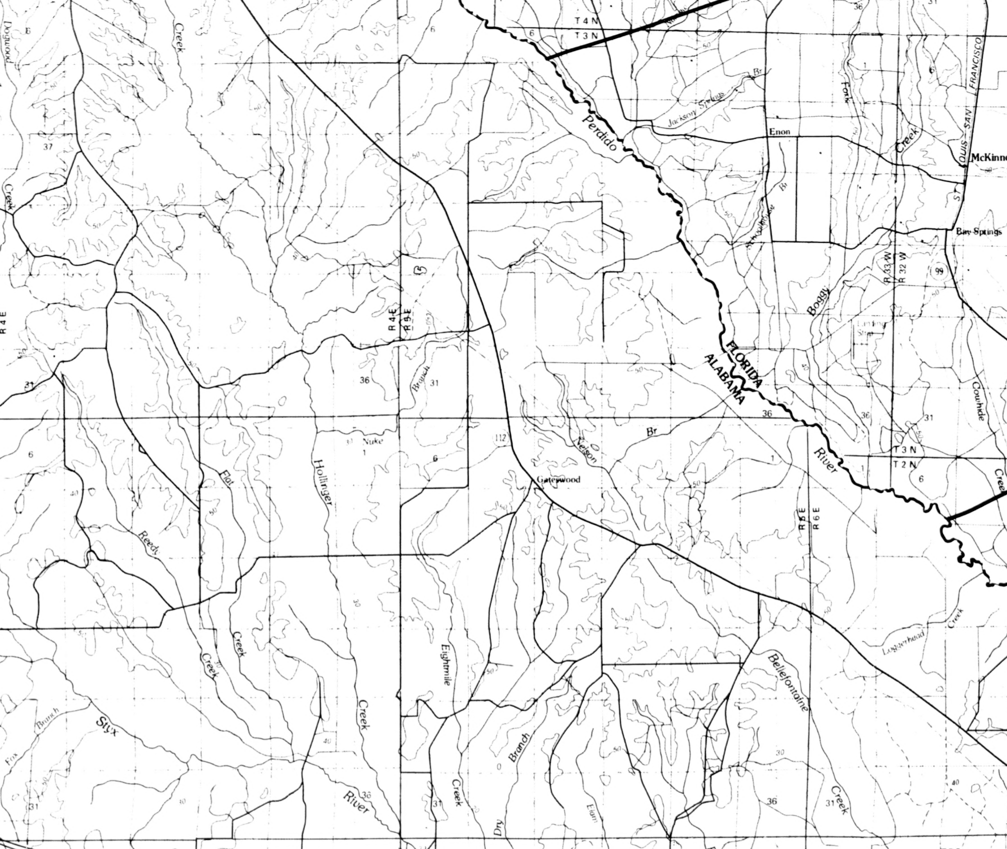
Produced by U.S. Fish and Wildlife
Service and Minerals Management Service

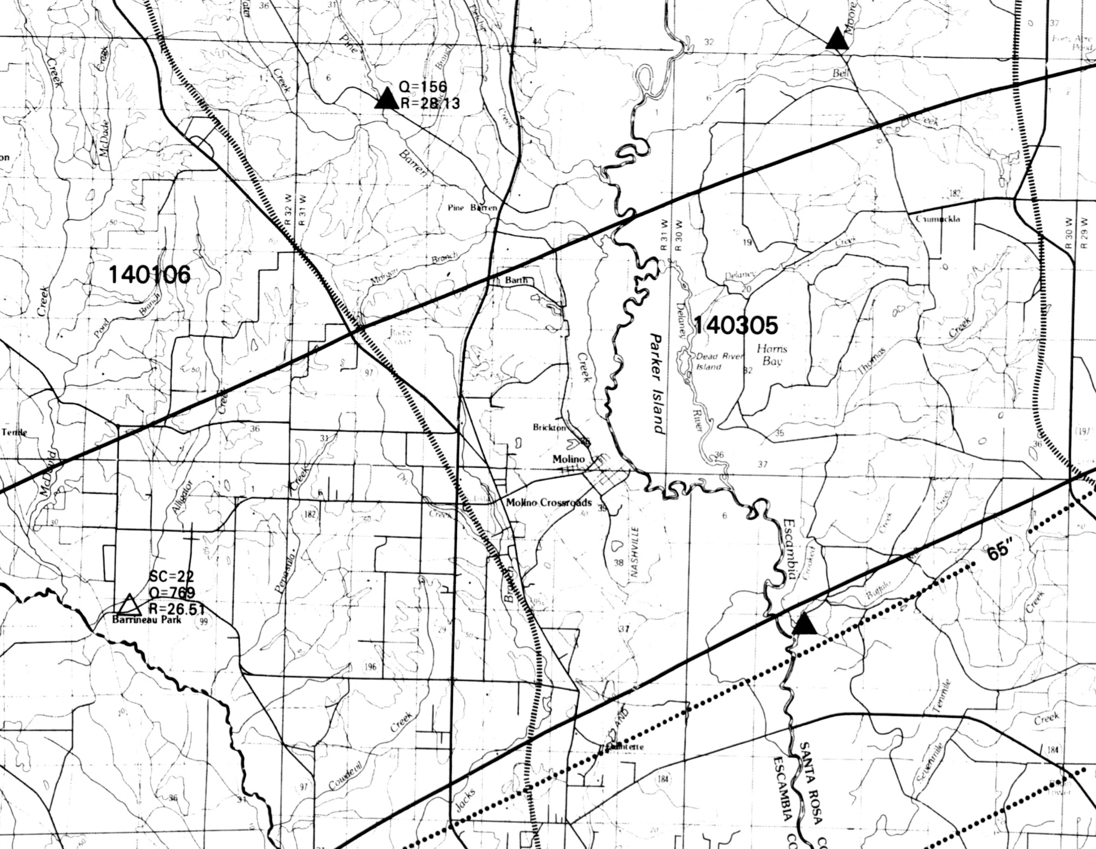
Projection and 10,000 meter grid, zone 17: Universal
Transverse Mercator
25,000-foot grid ticks based on Florida coordinate
system, west zone

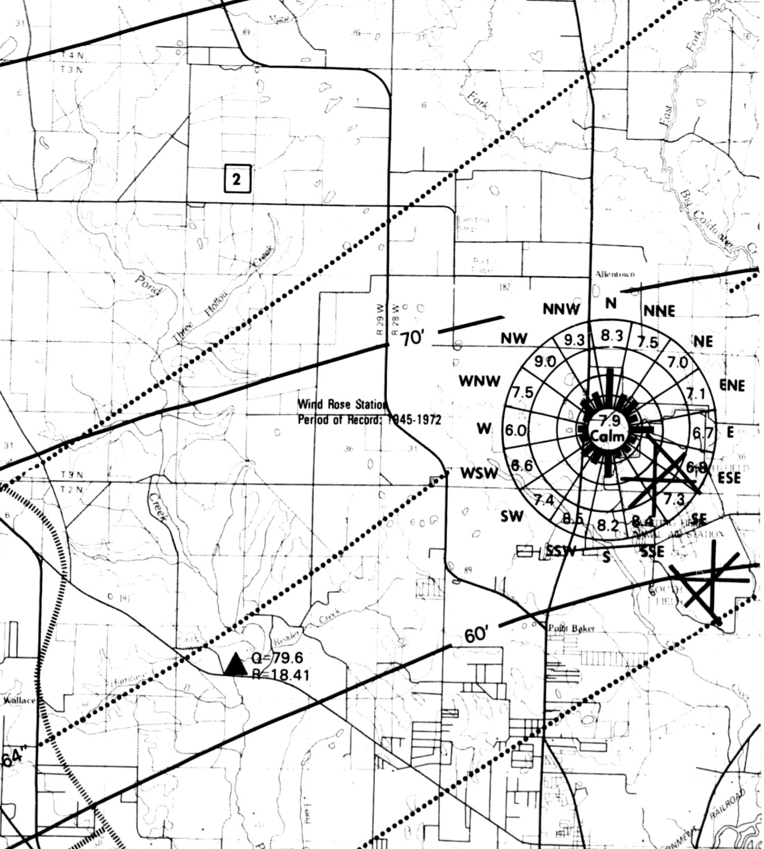


T 3 S
Grand Bay
RAFT
Bay
45
Big
32
33
37
340
Crab Creek
Bay
Delvan
TENSAW
T 4 S
41
40
48
COCHRANE


Lower Hall Landing
Whitehouse
Whitehouse Forks
Styx
Gravine Island
TENSAW
Chuckfee Bay
RIVER
John
Crab
Creek
Steam Mill Landing
Minette
Bay
Creek
Wilson
Creek
Stapleton
River
Juniper
Creek
T 3 S
T 4 S
R 3 E
RIVER
Little Bateau Bay
RIVER
Minette
Bay
Hunowell
Creek
Steelwood
Sibley
Creek
Rouns
Steelwood Lake
Creek
Big Bateau Bay
APALACHEE
Big Island
BLAKELEY
Bay Minette
R 1 E
R 2 E
R 2 E
R 3 E
River
Branch
Bridgehead
Spanish Fort
Creek
RIVER
Malbis
Turkey
Bay
Branch
Threemile
Creek
LOUISVILLE
Spring
Greenwood
D'Olive
T 4 S
T 5 S
BRIDGE


Dogwood
Creek
6
37
Creek
R 4 E
31
6
40
50
Reedy
Flat
Creek
Creek
Styx
Fox
Branch
River
Hollinger
Creek
Nuke
1
36
Branch
31
R 4 E
R 5 E
6
112
Gateswood
Nelson
Br
Eightmile
Creek
Dry
Branch
Elam
Bellefontaine
Creek
Perdido
River
FLORIDA
ALABAMA
T 4 N
T 3 N
Jackson Springs
Br
Enon
Fork
Creek
McKinno
SAN
FRANCISCO
ST
LOUIS
Bay Springs
R 33 W
R 32 W
99
Boggy
Schoolhouse
Br
Cowhide
Loggerhead
Creek
36
31
T 3 N
T 2 N
1
6
R 5 E
R 6 E
Cree
30


Q=156
R=28.13
140106
140305
SC=22
Q=769
R=26.51
Barrineau Park
65"
Pine Barren
Barth
Brickton
Molino
Molino Crossroads
Parker Island
Dead River Island
Harris Bay
Crumpckla
Delaney
Bell
Moore
Escambia
NASHVILLE
Quintette
SANTA ROSA CO
ESCAMBIA CO
R 32 W
R 31 W
R 30 W
R 29 W
Pine Creek
Barren Creek
Fletcher Creek
McDade Creek
McDavid Creek
Pond Branch
Morgan Branch
Alligator Creek
Pepoatilo Creek
Dry Creek
Coudevil Creek
Jacks Branch
Delaney Creek
River
Thomas Creek
Crooked Creek
Buffalo Creek
Tenmile Creek
Sevenmile Creek
97
182
196
99
184
29
36
37
38
35
31
6
1
19
20
32
44



T 4 N
T 3 N
2
Three Hollow Creek
Pond
Fork
East Fork
Big Coldwater C
Allentown
R 29 W
R 28 W
70′
Wind Rose Station
Period of Record: 1945-1972
N
NNE
NE
ENE
E
ESE
SE
SSE
S
SSW
SW
WSW
W
WNW
NW
NNW
8.3
7.5
7.0
7.1
6.7
6.8
7.3
8.4
8.2
8.5
7.4
6.6
6.0
7.5
9.0
9.3
7.9
Calm
T 3 N
T 2 N
Creek
Reader Creek
Q=79.6
R=18.41
60′
Point Baker
Wallace
64″
T 2 N
RAILROAD

—50′—

••••52″••••

6

Produced by U.S. Fish and Wildlife
Service and Minerals Management Service

Projection and 10,000 meter grid, zone 17: Universal Transverse Mercator
25,000-foot grid ticks based on Florida coordinate system, west zone

Overlay material compiled in 1983 from latest available data obtained from Federal, State and Local government agencies and other sources.

— **POTENTIOMETRIC CONTOURS OF THE FLORIDAN AQUIFER**

The map represents dry season water levels present in tightly cased wells penetrating the Floridan Aquifer during May of 1980. The contour interval is 5 and 10 feet. Contour lines have been generalized to allow for non-simultaneous water level measurement and variable well depth.
Groundwater flow is down-gradient from potentiometric highs and perpendicular to potentiometric contour lines.
(Measured in feet above mean sea level)

•• **MEAN ANNUAL ISOHYETAL (RAINFALL) CONTOURS**

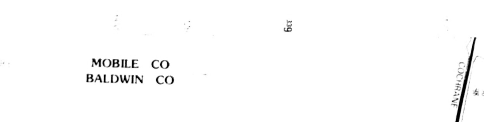
(1951-1980 National Weather Service Normal Base Period)
The contour interval is 1.0" (refer to narrative for monthly isohyetal maps and for trend evaluation).

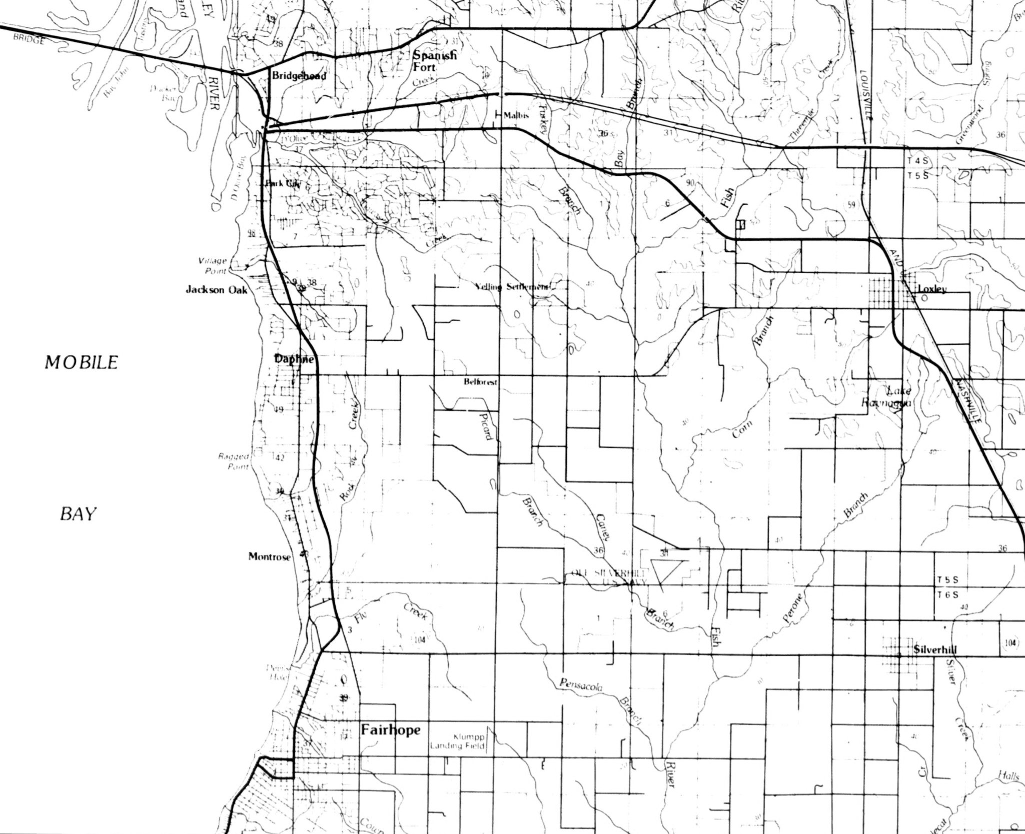
NATIONAL WEATHER SERVICE 30-YEAR CLIMATOLOGICAL STATION

(Number in the box on map refers to station name in supplemental legend'

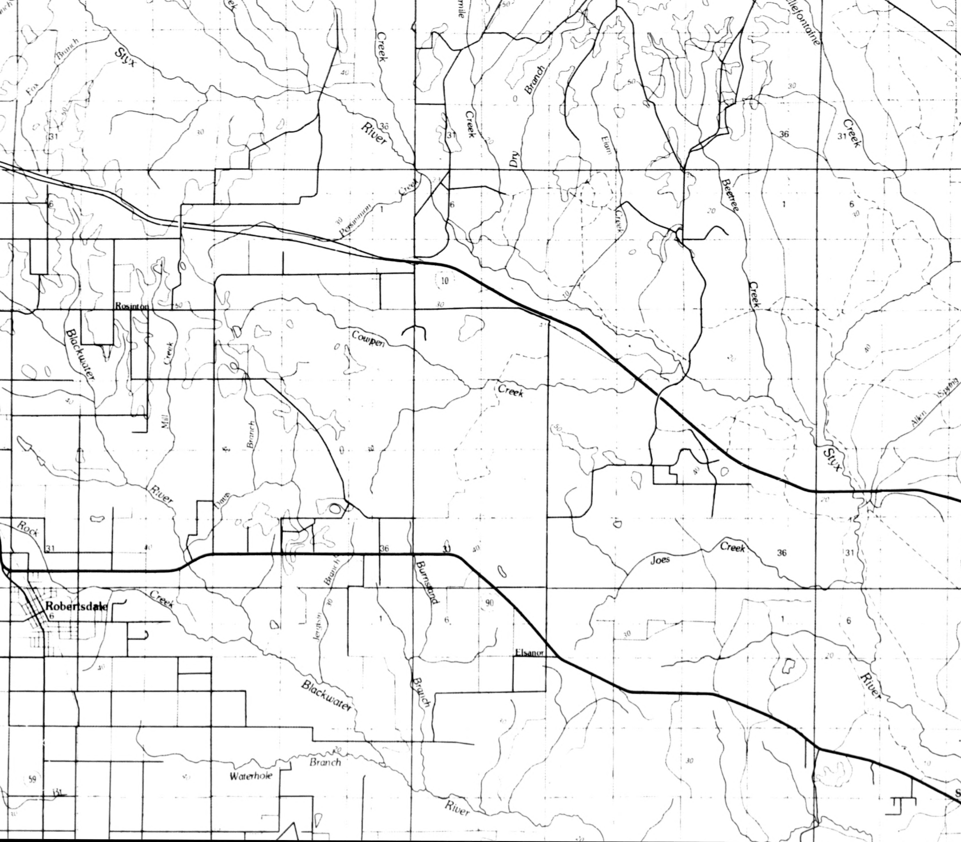
WIND ROSE STATION

Concentric circles represent 5%

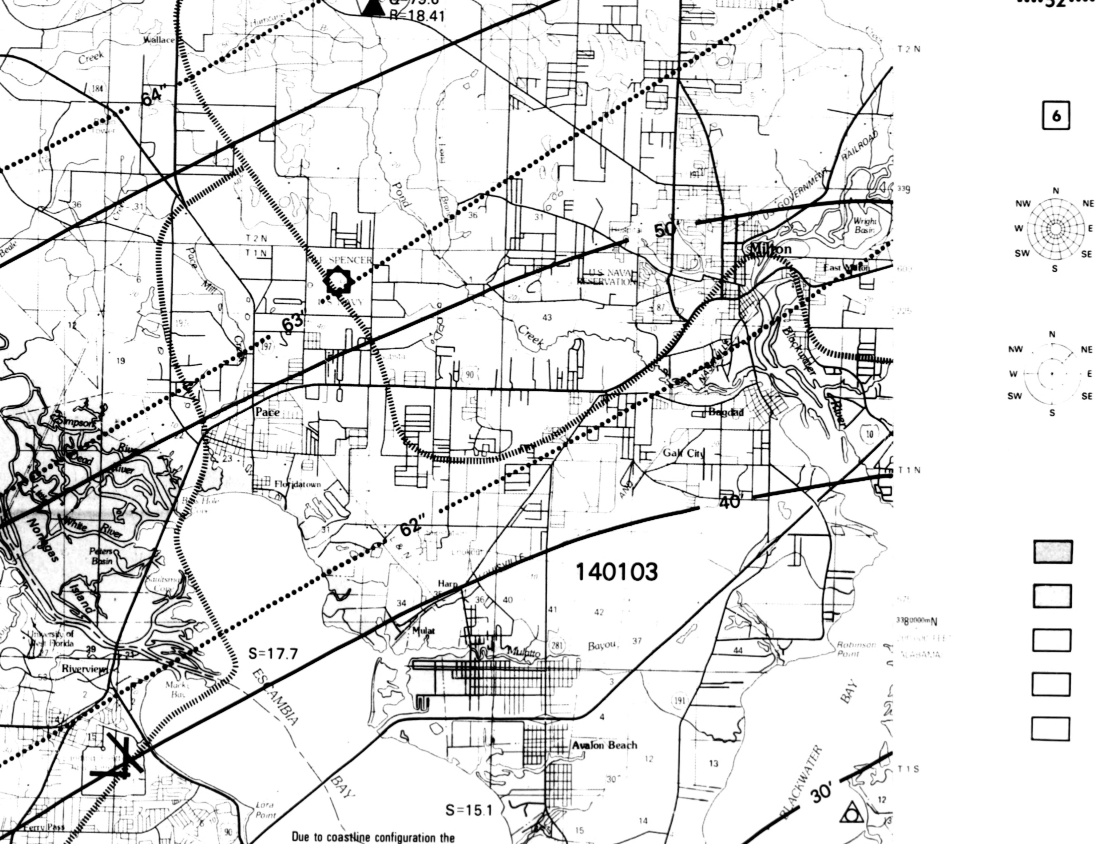

339
MOBILE CO
BALDWIN CO
COCHRANE
48



BRIDGE
RIVER
Bridgehead
Spanish Fort
Creek
Malbis
Turkey
Bay
Branch
Threemile
Creek
LOUISVILLE
Greenwood
Spring
T 4 S
T 5 S
Fish
D'Olive
D'Olive Bay
Park City
Village Point
Jackson Oak
Yelling Settlement
Loxley
AND
NASHVILLE
MOBILE
BAY
Daphne
Belforest
Picard
Branch
Corn
Branch
Lake Ravnaggia
Creek
Rock
Ragged Point
Montrose
Branch
Caney
OLD SILVERHILL U.S. NAVY
Branch
Perone
Branch
T 5 S
T 6 S
Fly
Creek
Silverhill
Silver
Creek
Fish
Pensacola
Branch
Fairhope
Klumpp Landing Field
River
Halls
Cr
Devils Hole
59
104
104


Fox Branch
Styx River
Creek
Persimmon Creek
Dry Branch
Creek
Elam Creek
Beetree Creek
Creek
Rosinton
Blackwater
Mill Creek
Branch
Cowpen Creek
Allen Spring
Styx River
Rock Creek
Robertsdale
Joes Creek
Burnstand Branch
Jergins Branch
Elsanor
Blackwater River
Waterhole Branch
10
90
59
131
31
36
1
6
30
40
50
20

196
Creek
Coudenil
Tenmile
Quintette
L AND N
184
Sevenmile
SANTA ROSA CO
ESCAMBIA CO
97
36
31
Jacks
6
1
31
36
95A
31
T 2 N
T 1 N
20
LOUIS - SAN FRANCISCO
River
LOUISVILLE
Cottage Hill
6
3
5
River
112
R 6 E
R 7 E
39
Rock
38
Cr
319
Cantonment
Creek
White
Brosnaham Island
39
River
Branch
Muscogee
184
40
Spanish
Hill
BALDWIN CO
ESCAMBIA CO
Gonzalez
OLF KINGS
U S NAVY
(Inactive)
297A
Clear
Creek
36
Elevenmile
Rices
Branch
Perdido
36
33
10
140107
38
21
25
TALLAHASSEE BASE LINE
T 1 N
T 1 S
ALABAMA
FLORIDA
OLF SITE 8A
U S NAVY
OLF SITE
U S NAVY
Beulah
90A
97
Thompson
90A
OLF SITE 4A
U S NAVY
Creek
Pine Forest
Ensley
Seminole
90
Creek
Lookout
20


R=18.41
Wallace
Creek
184
64"
36
31
T 2 N
T 1 N
Beale
Pace
Mill
Creek
Pond
Branch
36
31
50'
Milton
Wright Basin
East Milton
U.S. NAVAL RESERVATION
SPENCER
U.S. NAVY
63"
197
43
Creek
87
90
19
12
6
Pace
Bagdad
Gulf City
Floridatown
Simpson
River
Dead
River
White
River
Noriegas
Peters Basin
Island
Blackwater
River
10
339
RAILROAD
U.S. GOVERNMENT
NASHVILLE
AND
LOUISVILLE
L & N
62"
40'
140103
Harp
Mulat
Mulatto
Bayou
281
34
36
40
41
42
37
44
University of West Florida
Riverview
S=17.7
ESCAMBIA
BAY
191
Avalon Beach
Robinson Point
12
13
30'
S=15.1
Lora Point
Ferry Pass
90
14
15
BLACKWATER
BAY
30'
T 1 S
3380000mN
6
N
NE
E
SE
S
SW
W
NW
N
NE
E
SE
S
SW
W
NW
32

Due to coastline configuration the

CONTOURS

(1951-1980 National Weather Service Normal Base Period)
The contour interval is 1.0" (refer to narrative for monthly isohyetal maps and for trend evaluation).

NATIONAL WEATHER SERVICE 30-YEAR CLIMATOLOGICAL STATION

(Number in the box on map refers to station name in supplemental legend'

WIND ROSE STATION

Concentric circles represent 5% frequency interval. The average wind speed (mph) is listed in the outer quadrant of each vector direction (Wind rose data represents wind data that has been summarized by the National Climatic Center for Airports, Naval Air Stations and NWS Offices)

OFFSHORE SURFACE CURRENT ROSE

Resultant vectors for each season are shown. The magnitude of each vector is proportional to the velocity. (Concentric circles represent 3 centimeters/second currents)
Vectors defined by the New England Coastal Engineers Computer Model G.A.L.

S	Spring
Su	Summer
FW	Fall/Winter

HURRICANE INUNDATION ZONES

(Maximum areas subject to flooding by Storm Category, as defined by National Weather Service Computer Models)

Category #1 Storm (74-95 mph winds; probability of occurence 1:16 years)

Category #2 Storm (96-110 mph winds; probability of occurence 1:20 years)

Category #3 Storm (111-130 mph winds; probability of occurence 1:83 years)

Category #4 Storm (131-155 mph winds; probability of occurence no historical record)

Category #5 Storm (> 155 mph winds; probability of occurence no historical record)

(Hurricane inundation zones on this map represent generalized areas of maximum areal storm surge flooding by storm category. The scale and detail of this map are meant for planning purposes only. This map is unsuitable for determining the vulnerability of individual buildings to storm surge)

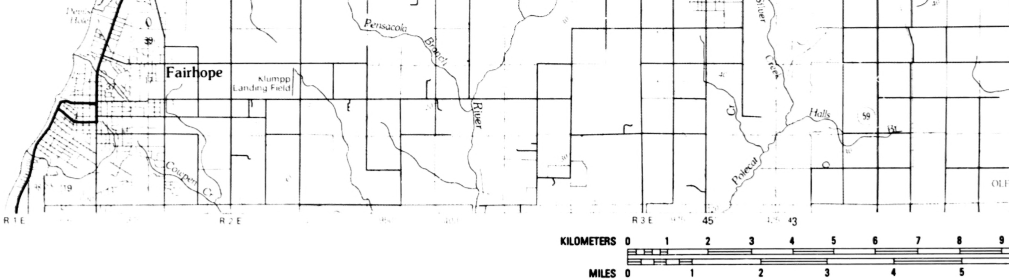
30 30
88 00

41

THE FLORIDA ECOLOGICAL ATLAS WAS PRODUCED BY THE
SERVICE DIVISION OF BIOLOGICAL SERVICES NATIONAL CO
TEAM (FWS OBS 82 47) AND THE MINERALS MANAGEME
PLANNERS DECISION MAKERS AND THE GENERAL PUBLIC
EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG L
WILDLIFE REQUIREMENTS AND THE MAINTENANCE OF ECO
THE STUDY AREA INCLUDES THE COASTAL COUNTIES ESCA
OKALOOSA WALTON WASHINGTON BAY CALHOUN GULF
JEFFERSON TAYLOR DIXIE LEVY CITRUS AND HERNANDO
OFFSHORE APPROXIMATELY 10 MILES THERE IS NO ATTEM
OR PRODUCTS OF THIS STUDY TO DEFINE THE LIMITS OF PR
JURISDICTION OF ANY FEDERAL STATE OR LOCAL GOVERN
THE GEOGRAPHICAL SCOPE OF THE REGULATORY PROGRAM
AGENCIES

THIS MAP HAS BEEN COMPILED FROM A VARIETY OF SOURC
INCLUDING MAPS AERIAL PHOTOS AND REPORTS SINCE M
CONTAINED GENERALIZED LOCATIONS OF RESOURCES AND
FEATURES THE USER SHOULD NOT RELY ON THESE MAPS F
MEASUREMENTS OF DISTANCES OR AREAS

MICROCOPY RESOLUTION TEST CHART
NBS 1010a
ANSI and ISO TEST CHART No 2
1.0
1.1
1.25
2.8
3.2
3.6
4.0
2.5
2.2


Fairhope
Klumpp
Landing Field
Pensacola
Branch
River
Cowpen
Cr.
Silver
Creek
Cr.
Halls
59
Polecat
OLF
19
R 1 E
R 2 E
R 3 E
45
43
KILOMETERS 0 1 2 3 4 5 6 7 8 9
MILES 0 1 2 3 4 5

U.S. FISH AND WILDLIFE
OASTAL ECOSYSTEMS
NT SERVICE FOR COASTAL
TO DETERMINE AND
LAND USES. FISH AND
LOGICAL DIVERSITY
MBIA, SANTA ROSA,
, FRANKLIN, WAKULLA,
AND EXTENDS
PT. IN THE DESIGN
ROPRIETARY
MENT TO ESTABLISH
MS OF GOVERNMENT

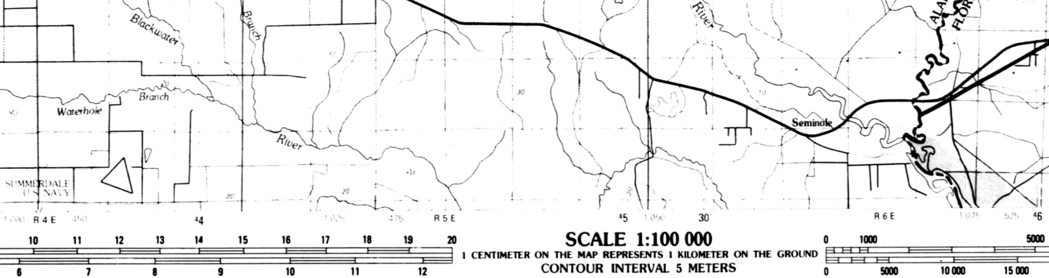
CE MATERIALS
IANY SOURCES
OTHER MAPPED
OR PRECISE

PRIMARY SOURCES OF MAPPED INFORMATION:

HYDROLOGY: Potentiometric Surface of the Floridan Aquifer, Northwest Florida Water Management District, Tallahassee, Florida, 1980.
Potentiometric Surface of the Floridan Aquifer, Suwanee River Water Management District, Live Oak, Florida, 1980.
Potentiometric Surface of the Floridan Aquifer, Southwest Florida Water Management District, Brooksville, Florida, 1981.
Sea, Lake, and Overland Surges from Hurricanes (SLOSH) Model, National Oceanic and Atmospheric Administration, Silver Spring, Maryland, 1981.
Water Resources Data for Florida, U.S. Geological Survey, Tallahassee, Florida, 1979, 1980.
Water Quality Inventory for the State of Florida, Dept. of Environmental Regulation, Tallahassee, Florida, 1982.
Current Atlas of the West Florida Shelf, New England Coastal Engineers, Bangor, Maine. 1982.

CLIMATOLOGY: National Climatic Center, Asheville, North Carolina. 1981.

FOR COMPLETE REFERENCES SEE MAP NARRATIVE


Blackwater
Branch
Branch
Waterhole
River
River
Seminole
SUMMERDALE
U.S. NAVY
R 4 E
R 5 E
R 6 E
44
45
30
46
10 11 12 13 14 15 16 17 18 19 20
6 7 8 9 10 11 12
0 1000 5000
0 5000 10 000 15 000

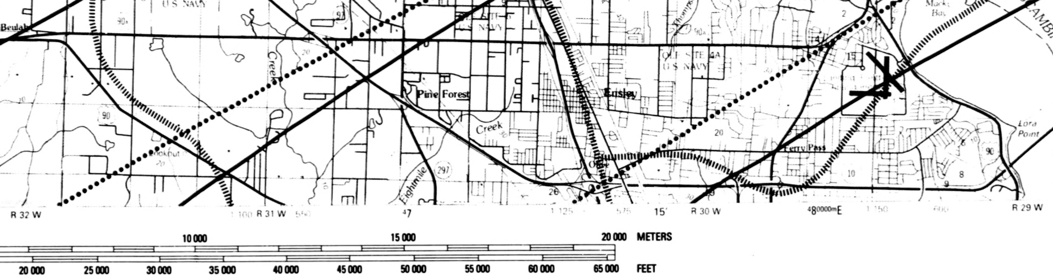
SCALE 1:100 000

1 CENTIMETER ON THE MAP REPRESENTS 1 KILOMETER ON THE GROUND

CONTOUR INTERVAL 5 METERS

CLIMATOLOGICAL STATION NAMES

1. Pensacola FAA Airport
2. Milton Experimental Station
3. Crestview FAA Airport
4. De Funiak Springs
5. Niceville
6. Chipley 3 E
7. Panama City NE
8. Blountstown
9. Apalachicola Airport
10. St. Marks 5 SSE
11. Monticello 3 W
12. Cross City 2 WNW
13. Inverness
14. Brooksville Chinsegut Hill


U S NAVY
Beulah
90A
97
U S NAVY
Creek
Pine Forest
Ensley
OLF SITE 4A
U S NAVY
Creek
90
Lookout
297
Eightmile
Otter
26
Ferry Pass
20
10
90
8
9
Lora Point
Macky Bay
ESCAMBIA
BAY
R 32 W
R 31 W
47
15'
R 30 W
480000mE
R 29 W
10 000
15 000
20 000 METERS
20 000
25 000
30 000
35 000
40 000
45 000
50 000
55 000
60 000
65 000 FEET

Due to coastline
inundation zones
generalized boun

.S. GEOLOGICAL SURVEY
YDROLOGIC UNIT BOUNDARIES (Cont'd)

Coastal Area between Ochlockonee and Apalachicola Rivers (130013)
Ochlockonee River Basin (120003)
St. Marks and Wakulla Rivers and Coastal Area between Aucilla and Ochlockonee Rivers (120001)
Aucilla River Basin (110103)
Coastal Area between Suwannee and Aucilla Rivers (110102)
Suwannee River Basin below Withlacoochee River excluding Santa Fe River Basin (110205)
Waccasassa River and Coastal Area between Withlacoochee and Suwannee Rivers (110101)
Oklawaha River Basin (080102)
Withlacoochee River Basin (100208)
Coastal Area from Tampa Bay to Withlacoochee River (100207)

▲ Q=___cfs
R=___in/yr

U.S. GEOLOGICAL SURVEY STREAM GAGING STATION
Mean Annual Discharge (cubic feet/second) = Q
Mean Annual Runoff (inches/year) = R

△ SC=___mmhos
Q=___cfs
R=___in/yr

U.S. GEOLOGICAL SURVEY STREAM GAGE AND SURFACE WATER QUALITY STATION
Mean Annual Surface Water Specific Conductivity (micromhos) = SC
Mean Annual Discharge (cubic feet/second) = Q
Mean Annual Runoff (inches/year) = R

△

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION FIXED SURFACE WATER STATION
(Insufficient period of record to establish a long term mean)

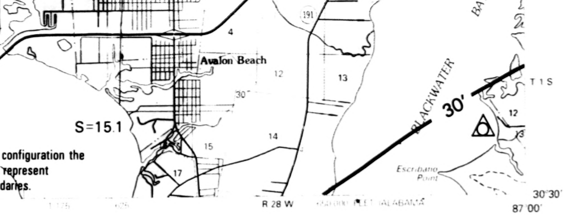
○ SC=___mmhos
Cl=___mg/l

U.S. GEOLOGICAL SURVEY GROUND WATER OBSERVATION AND WATER QUALITY WELL
Mean Annual Ground Water Specific Conductivity (micromhos) = SC
Dissolved Chloride (milligrams/liter) = Cl

S=___ppt

MEAN ANNUAL COASTAL SALINITY
(parts per thousand) = S

STUDY AREA BOUNDARY
▮▮▮▮▮▮▮▮▮▮ Offshore
— — — Inland (County)
—– - - —– Inland (State)



191
4
Avalon Beach
12
13
30
S=15.1
14
15
17
BLACKWATER
30′
T 1 S
12
13
Escribano Point
30°30′
87°00′
R 28 W
ALABAMA

configuration the
represent
daries.

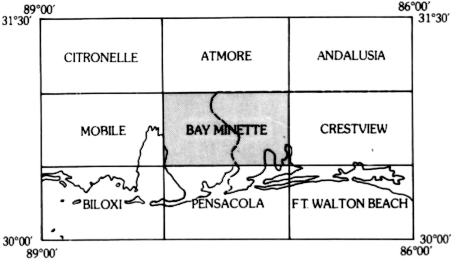
☐ probability of occurence no historical record)

☐ Category #5 Storm (> 155 mph winds; probability of occurence no historical record)

(Hurricane inundation zones on this map represent generalized areas of maximum areal storm surge flooding by storm category. The scale and detail of this map are meant for planning purposes only. This map is unsuitable for determining the vulnerability of individual buildings to storm surge)

U.S. GEOLOGICAL SURVEY HYDROLOGIC UNIT BOUNDARIES

Perdido River Basin (14106)
Perdido Bay, Inflow and Coastal Area (140107)
Lower Conecuh River Basin (140304)
Escambia River Basin (140305)
Blackwater River Basin (140104)
Escambia Bay, Inflow and Coastal Area (140105)
Yellow River Basin (140103)
Choctawhatchee Bay, Inflow and Coastal Area (140102)
Pea River Basin (140202)
Choctawatchee River below Pea River (140203)
St. Andrews Bay, Inflow and Coastal Area (140101)
Chipola River Basin (130012)
Apalachicola River Basin (130011)
Apalachicola Bay Coastal Area and Offshore Islands (130014)



89°00′
31°30′
86°00′
31°30′
CITRONELLE
ATMORE
ANDALUSIA
MOBILE
BAY MINETTE
CRESTVIEW
BILOXI
PENSACOLA
FT. WALTON BEACH
30°00′
89°00′
30°00′
86°00′

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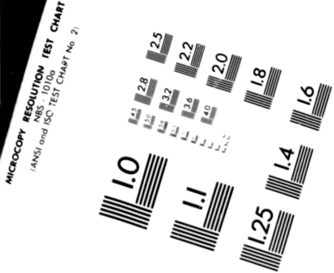
BEST AVAILABLE COPY



MICROCOPY RESOLUTION TEST CHART
NBS 1010a
(ANSI and ISO TEST CHART No. 2)

1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0